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American Petroleum Institute
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Monthly Statistical Report

Finance, Accounting, and Statistics Department

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SUMMARY

Total deliveries dropped 2.4 percent in September, their first year-to-year decline since March and the largest single-month decline in a year-and-a-half. The largest single factor contributing to the drop of 430 thousand B/D was a 365 thousand B/D, 31 percent decline for residual fuel oil, which a year ago had been enjoying a price advantage versus natural gas which has since evaporated. Total deliveries for the third quarter as a whole were only flat versus a year ago, again mainly due to a large decline for residual fuel oil.

Gasoline deliveries, as well, were weak in September, falling 1.7 percent despite little if any indication of a slowdown in underlying consumption. Distillate deliveries, however, rose 3.2 percent and kerosine jet fuel deliveries increased over 13 percent—mostly because of the military conversions from naphtha jet since the latter part of last year. Despite September's decline in total deliveries, year-to-date deliveries are still up 2.8 percent, more or less in line with estimated current growth in underlying consumption.

A 2.8 percent increase in Alaskan crude oil production held the decline in overall domestic output to 2.1 percent for September. But for the year to date, eroding lower 48 production, which fell 3.5 percent for September, has been the main cause of U.S. production's decline of 3.1 percent or about 215 thousand B/D.

As for imports, September's were down slightly from levels in July and August, which had been the highest monthly levels in seventeen years. But, at nearly 9.4 million B/D, they were still up 10.4 percent from a year ago and contributed to another substantial stock rise of 32 million barrels. This put the third quarter's stock build at 88 million barrels, the largest quarterly rise in fifteen years. The jump in inventories brought total stocks to 1.113 billion barrels, 25 million barrels above the recent-year average for September and the highest September level in eleven years.

The inventory increase took place in both crude and products, with crude stocks, which have typically declined from August to September in recent years, rising by 10 million barrels for the month. Inventories of both gasoline and distillate rose about 6 million barrels. Distillate stocks ended the month at 142 million barrels, about 10 million barrels above recent-year average—an average based on data from a period before the low-sulfur highway diesel regulations went into effect, which may have increased storage requirements.

Despite September's weak deliveries, input to distillation units at refineries rose 1.9 percent in September, slowing only slightly from August's 3.0 percent increase. Utilization of reported capacity reached 94.3 percent for the month, the highest for September since at least the mid-1970s. Gasoline output continued its pattern of year-to-year declines, falling 3.1 percent, though production of distillate and jet fuel continued to rise strongly.

PRODUCT SUPPLIED

Gasoline

DELIVERIES DROP DESPITE GROWTH IN TRAVEL.

Gasoline deliveries were unusually weak in September, their 1.7 percent decline from a year ago the largest for a single month in over a year and a half. September's drop, in fact, was large enough to pull gasoline deliveries for the quarter as a whole down to a level only about even with a year ago. However, with year-to-date deliveries through August up 1.4 percent, and with growth in highway travel apparently continuing, their is little to indicate that there has been significant softening in the underlying consumption of gasoline.

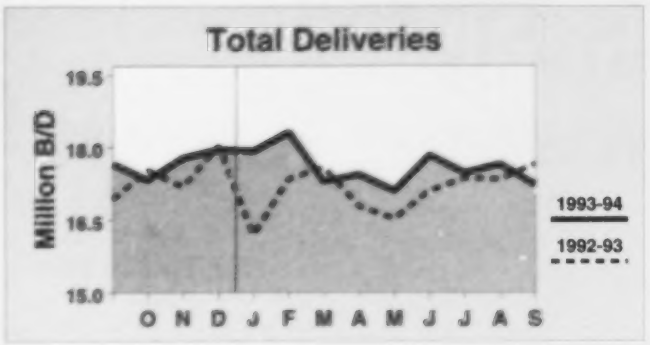
The latest data on travel, for July, showed a year-to-year increase of 2.1 percent, only a minor departure from the 2.5 percent average growth of recent months. If July's increase was a bit below that of prior months, it was more because of above-trend travel in the year-ago period than because of any weakness this year. Furthermore, the economy has apparently still been performing well versus a year ago, giving little reason to believe transportation demand has suddenly flattened out.

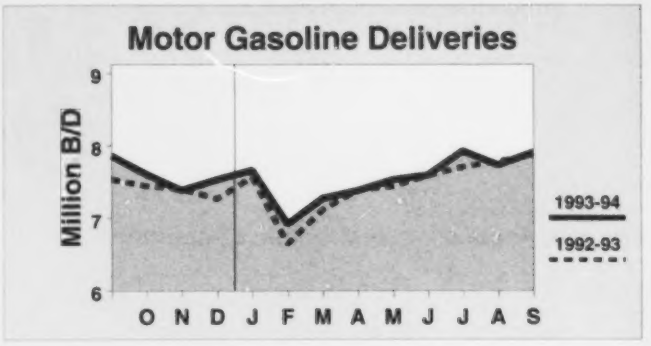
Meanwhile, regional data available through July show that the West Coast (PAD V) has had the strongest growth in gasoline deliveries so far this year. That still only amounted to a 2.5 per-

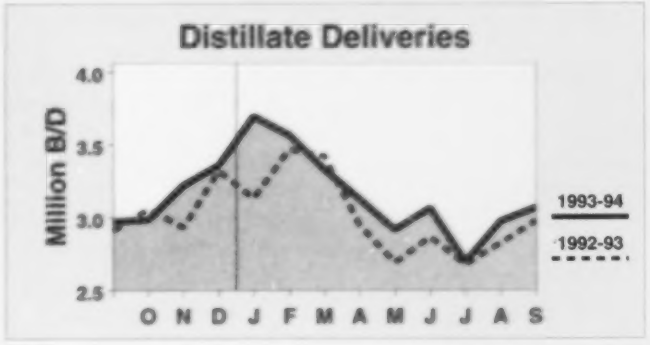
API ESTIMATES

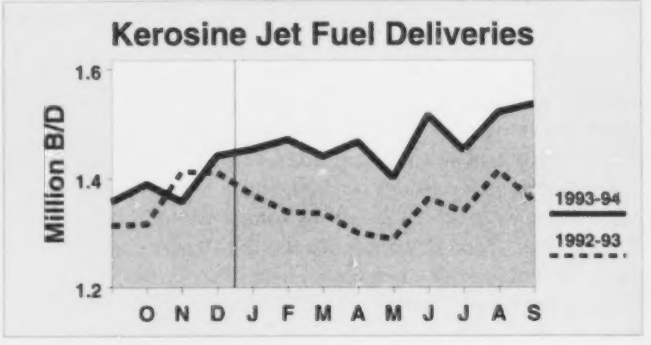
	SEPTEMBER		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	17.2	(2.4)	17.6	2.8
Crude production	6.6	(2.1)	6.6	(3.1)
Total imports	9.4	10.4	9.0	6.1
Stocks (million bbl)	1,113	3.1	na	na

Published October 19, 1994









cent increase in deliveries for the first seven months. The West Coast accounts for about 18 percent of U.S. gasoline deliveries. The East Coast (PAD I), which alone accounts for a third of gasoline deliveries, has experienced only about a 1 percent increase. Growth in deliveries for the rest of the U.S. averaged about the same as for the country as a whole, about 1.6 percent for the first seven months.

Distillate Fuel Oil

UP, BUT BY LESS THAN RECENT TREND. Through August, distillate deliveries' growth had averaged a strong 5.7 percent—making September's 3.2 percent rise look a bit modest by comparison. The month's mild weather, though nationally accumulating about 30 percent fewer heating degree days (an indicator of heating demand) than last September, played only a minor role in moderating the month's deliveries increase.

First, in the largest heating oil consuming region, the East Coast, the difference versus last year was more moderate, with fewer extremes, hot or cold, than for last September. Second, being on the shoulder of the heating season, the negative impact on overall distillate consumption for the month we estimate was at most 20-30 thousand B/D. Although September's deliveries were a bit below trend, in view of continued year-to-year growth in indicators of economic activity, we estimate that consumption of distillate fuel oil, spurred in particular by diesel demand, continues at 4 to 5 percent.

Deliveries of high-sulfur distillate, which include deliveries to the home heating oil market, have so far shown only minimal signs of a seasonal rise as the heating season begins. Deliveries of high-sulfur distillate, which had averaged 1.8 million B/D over the peak of last winter's heating season, this September still amounted to only about 1.2 million B/D, not much above the 1.0-1.1 million B/D they have been averaging over the summer.

Regionally, signs are that the growth in distillate demand experienced so far this year has been relatively evenly spread across the nation. Growth for the first seven months of 1994 in the East and Midwest has averaged 6 percent, and on the West Coast have approached 7 percent. On the Gulf Coast, however, growth in deliveries has amounted to only about 3 percent.

Kerosine Jet Fuel

AIR CARGO GROWTH CONTRIBUTES TO COMMERCIAL DEMAND. Buoyed by defense conversion, September deliveries of kerosine jet fuels continued to exceed those of the same month from the year before, despite the relatively static demand for fuel from air passenger carriers. Final deliveries were 13 percent greater in September than they had been during the same interval the year before, and were 1 or 2 percent higher than indicated by underlying economic trends. In the third quarter deliveries were roughly 10 percent higher than those in the third quarter 1993. Although jet kero deliveries have grown considerably since the year before, third quarter sales were only 130 thousand B/D higher in 1994 than they had been in 1993, somewhat less than the expected 150 thousand B/D increase in demand from defense conversion programs on the East and West Coast.

While defense conversion has resulted in higher deliveries, this is a one-time effect; in the long run, the underlying pattern of demand for kerosine jet fuel is determined largely by changes in commercial air traffic. Airline passenger travel, which accounts for more than 1 million B/D of final jet kero demand and is the largest segment of commercial jet kerosine demand, has not been responsible for the higher deliveries during the third quarter. Although the total number of passenger enplanements rose by more than 5 percent and the total number of revenue passenger miles rose by more than 4 percent from the third quarter of 1993, the airlines have not responded by making more passenger seats

available. Instead, the airline industry as a whole has reduced the total number of available seat miles by about one-half percent. Coupled with ongoing efforts to increase fuel efficiency, these factors suggest that the commercial passenger component of the demand for jet fuel has diminished by an estimated 1 or 2 percent, compared with demand in the same period a year ago.

Although commercial demand for fuel for passenger flights has remained static, demand for jet kero for air cargo flights has increased rapidly. As a whole, we estimate that air cargo flights represent between 8 and 10 percent of the total commercial demand for jet kero, and account for approximately 100 thousand B/D of total deliveries. During the third quarter, the air cargo industry is estimated to have experienced a 13 percent increase in the total volume of cargo versus the third quarter in 1993. At the same time, total industry capacity, measured as the number of available flight cargo ton/kilometers supplied by the industry, has risen by 5 percent. Based on these facts, we estimate that the demand for jet fuel tied to air cargo flights is growing at a rate of 5-10 percent per year.

Residual Fuel Oil

DELIVERIES FALL TO A RECENT-YEAR LOW.

Relatively mild weather and weak demand for air conditioning along the East Coast, accompanied by the continuation of exceptionally low prices for natural gas resulted in record low levels of residual oil deliveries during September. Resid deliveries in September were the lowest in any month in more than two decades. Compared to the deliveries of September 1993, deliveries were down by 31 percent; however, at least 50 percent of the nearly 365 thousand B/D decline between periods must be attributed to the unusually high level of deliveries of the year before, caused by strong cooling demand. The dramatic drop in deliveries accompanied a 70 percent reduction in cooling days in New England during September of 1994 compared with the previous September, along with a similar 45 percent reduction in the Mid-Atlantic states and a 23 percent reduction in the Southeast, all areas with strong resid use by utilities.

During the third quarter, total residual oil deliveries were down by nearly 15 percent compared to the third quarter the year before. Part of this is due to an unfavorable price differential. Since the beginning of July, the cost per BTU of residual oil has been greater than the cost per BTU of natural gas. By the end of September, resid prices were between 20 and 30 cents per million BTU higher than the price of natural gas. In addition, demand for electric air conditioning along the East Coast was between 12 and 18 percent less during the third quarter than it had been during the same interval in 1993, lessening utility reliance on resid to meet summer peaks. The combination of these two factors is responsible for making the average deliveries of residual fuel in the third quarter lower than any third quarter since at least 1970, despite the relatively high deliveries in August, which were around 90 thousand B/D greater than estimated demand.

Despite the record low third quarter demand for resid, average year-to-date deliveries are almost exactly the same for this year, compared with the year before. The low third quarter demand for resid is balanced by the high demands for resid from earlier in the year, prompted by the record cold temperatures and a more favorable price ratio with natural gas. Although 1994 year-to-date deliveries are very close to the deliveries over the same period in 1993, they are nearly 3 percent lower than the equivalent year-to-date deliveries in 1992.

Other Oils

DOWN 2.8 PERCENT FOR SEPTEMBER.

September's deliveries of "other oils", declining 2.8 percent, year to year, were a bit weak, given that from the beginning of the year through August, deliveries had managed an increase averaging 3.8 percent. Despite September's decline, we estimate that underlying demand for "other oils" is still positive and running around 4 percent or so.

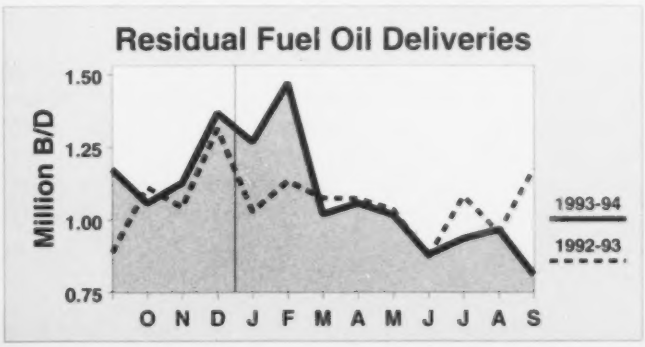
Even with September's decline, deliveries of "other oils" for the year to date have risen 3.1 percent, slightly ahead of the increase for total deliveries. Although "other oils" fell slightly behind total deliveries last year, over the longer term, the "other oils" category, which makes up fully a quarter of domestic petroleum deliveries, has tended to grow more (or decline less) than overall petroleum deliveries. Since 1990, year-to-date deliveries of "other oils" have grown an average of 1.8 percent per year, versus less than half that for total deliveries. The largest share of growth has been due to rising demand for petrochemical feedstocks, with demand for lubricants, asphalt, and other products relatively flat versus the same period four years ago.

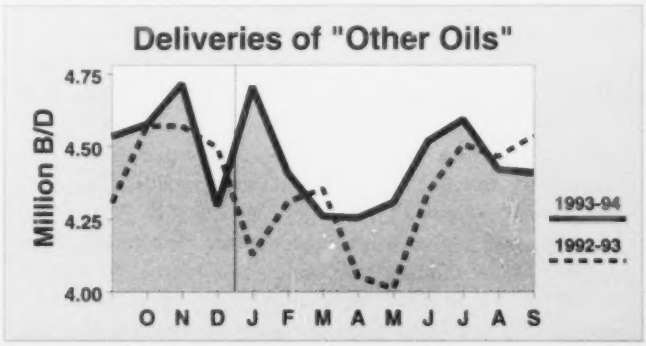
SUPPLY

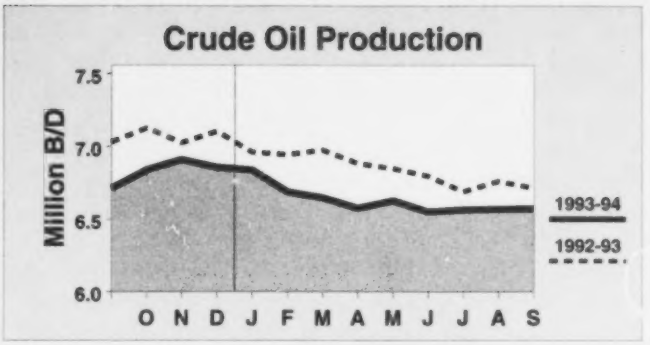
Production

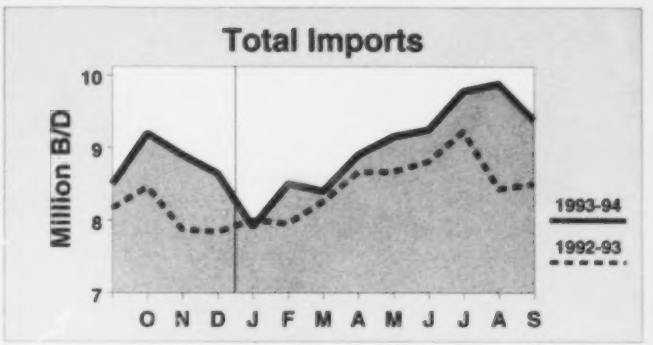
ALASKA HELPS SLOW CRUDE OIL'S DECLINE.

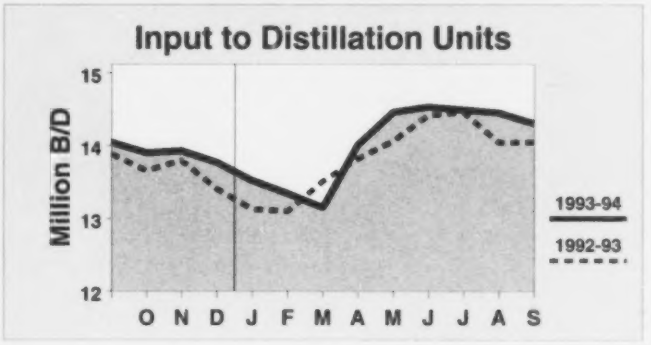
Increases in Alaskan crude oil production in recent months were partially responsible in reducing the period-to-period annual decline from 3.6 percent in the first half of 1994 to 2.2 percent in the third quarter. During the third quarter, production in the lower 48 states was down by more

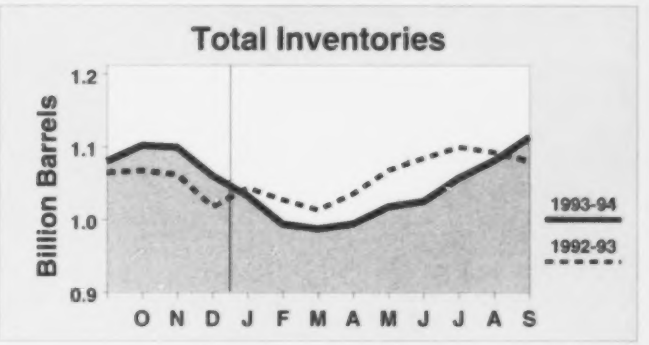












than 3 percent, while at the same time, Alaskan output was nearly 1 percent higher than it had been during the same interval in 1993. In the most recent month, production in the lower 48 states fell by more than 180 thousand B/D from its level in September, 1993, while production in Alaska rose by more than 40 thousand B/D.

The increase in Alaskan production during the third quarter is the result of the implementation of GHX-2, an advanced oil recovery system. During the third quarter of 1993, total production from the North Slope was relatively low, due to temporary production reductions required by the first phase of the GHX-2 program. With the completion of the second phase at the end of September, it is estimated that the project raised Alaskan production capacity by 100 thousand B/D and has increased recoverable reserves by 375 to 400 million barrels.

Imports

HIGH IMPORTS BOOST DOMESTIC INVENTORIES. At nearly 9.4 million B/D, total imports in September were up 10.4 percent from a year ago but were down from the even higher levels of July and August. Even so, as evidenced by the month's unusually large stock build, we estimate that this was still 400 thousand B/D or so above underlying needs. Imports in recent months have been at their highest levels in more than seventeen years, boosted by substantial inventory building during the third quarter. Of the average 9.7 million B/D imported over the past three months, roughly 700 thousand B/D has gone into inventory building above the seasonal norm.

During the third quarter, the major growth component in imports shifted away from products towards crude oil. During the first half of 1994, most of the roughly 300 thousand B/D, year-to-year increase in imports had been in the form of petroleum products. But for the third quarter, imports rose nearly 970 thousand B/D, of which more than 860 thousand B/D was in the form of crude oil. For September, product imports were actually down 6.7 percent to 1.8 million B/D, while crude oil imports rose more than 15 percent to 7.6 million B/D.

Imports of finished gasoline fell from strong levels of around half a million B/D in July and August to about 350 in September—but were still up over 80 thousand B/D from a year ago. Distillate imports rose 43 thousand B/D from weak levels a year ago to 180 thousand B/D, while imports of kerosine jet fuel rose 25 thousand B/D to a relatively strong 113 thousand B/D. Meanwhile, weak resid demand contributed to a drop in residual fuel oil imports to a new, recent-year low of 187 thousand B/D, less than half the 430 thousand B/D imported a year earlier.

Refinery Operations

UTILIZATION FOR SEPTEMBER RISES 1.9 PERCENT. Despite September's weak deliveries, input to distillation units at refineries rose 1.9 percent in September, slowing only slightly from August's 3.0 percent increase. Utilization of reported capacity reached 94.3 percent for the month, surpassing the recent-year high for September reached a year ago of 92.8 percent. For the year to date, refinery utilization has averaged 92.7 percent, up over a point from the same period a year ago and the highest for a similar period since at least the mid-1970s.

Gasoline output rose slightly from August's level to 7.34 million B/D in September. Versus one year earlier, however, it nevertheless continued its pattern of declines, falling 3.1 percent. Distillate production rose 4.1 percent, despite the decline in deliveries for the month. Output of kerosine jet fuel jumped over 16 percent from weak levels a year ago, while residual fuel oil production dropped 2.7 percent from stronger-than-usual levels last September.

Inventories

THIRD QUARTER SEES LARGEST BUILD 'N FIFTEEN YEARS.

Total stocks continued to rise substantially in September, as they have over the past three months as a whole. With September's 32 million barrels increase, the total rise for the quarter as a whole reached 88 million barrels, the largest quarterly build in fifteen years. The jump in inventories brought total stocks to 1.113 billion barrels, 25 million barrels above the recent-year average for September and the highest September level in eleven years.

Crude stocks, which have typically declined from August to September in recent years, instead rose by 10 million barrels for the month. This put crude oil inventories at 332 million barrels, close to the average monthly level for the first time since the beginning of this year.

Product stocks also contributed to the rise in total stocks. Gasoline stocks rose 6 million barrels to 212 million barrels, still about 5 million barrels below average for September but well within the observed range for September of recent years. For distillates, inventories rose a normal 6 million barrels to 142 million barrels, about 10 million barrels above recent-year average—an average based on data from a period before the low-sulfur highway diesel regulations went into effect, which may have increased storage requirements.

ESTIMATED UNITED STATES PETROLEUM BALANCE[1]
(Daily average in thousands of 42 gallon barrels)

Disposition and Supply	September 1994[2]	September 1993[3]	% Change	Year-to-Date 1994[4]	Year-to-Date 1993[3]	% Change
Disposition:						
Total motor gasoline	7,477	7,607	(1.7)	7,540	7,460	1.1
Finished oxygenated	962	1,451[E]	(33.7)	1,211	1,262[E]	(4.0)
Finished reformulated	0	na	na	0	na	na
Finished other	6,515	6,156[E]	5.8	6,329	6,198[E]	2.1
Naphtha-jet	63	140	(55.0)	60	123	(51.2)
Kerosine-jet	1,536	1,357	13.2	1,473	1,344	9.6
Distillate fuel oil	3,067	2,973	3.2	3,154	2,993	5.4
≤ 0.05 percent sulfur	1,896	1,384[E]	37.0	1,775	474[E]	274.5
> 0.05 percent sulfur	1,171	1,589[E]	(26.3)	1,379	2,519[E]	(45.3)
Residual fuel oil	809	1,173	(31.0)	1,043	1,045	(0.2)
All other oils (including crude losses)	4,408	4,534	(2.8)	4,430	4,299	3.1
Reclassified[5]	-140	-134	na	-128	-178	na
Total domestic products supplied	17,220	17,650	(2.4)	17,572	17,086	2.8
Exports	905	902	0.3	899	991	(9.3)
Total disposition	18,125	18,552	(2.3)	18,471	18,077	2.2
Supply:						
Domestic liquids production:						
Crude oil (including condensate)	6,570	6,712	(2.1)	6,625	6,839	(3.1)
Natural gas liquids	1,740	1,732	0.5	1,700	1,757	(3.2)
Other supply[6]	1,501	1,206	24.5	1,317	1,208	9.0
Total domestic supply	9,811	9,650	1.7	9,642	9,804	(1.7)
Imports:						
Crude oil (excluding SPR imports)	7,564	6,547	15.5	7,008	6,694	4.7
From Canada	966	1,023	(5.6)	953	876	8.8
All other	6,598	5,524	19.4	6,055	5,818	4.1
Products	1,819	1,950	(6.7)	2,013	1,808	11.3
Residual fuel oil	187	430	(56.5)	337	359	(6.1)
All other	1,632	1,520	7.4	1,676	1,449	15.7
Total imports	9,383	8,497	10.4	9,021	8,502	6.1
Total supply	19,194	18,147	5.8	18,663	18,306	2.0
Stock change, all oils	1,069	-405	na	192	229	na
Refinery Operations:						
Input to crude distillation units	14,305	14,045	1.9	14,035	13,846	1.4
Operable capacity	15,175	15,142	0.2	15,134	15,147	(0.1)
Refinery utilization[7]	94.3	92.8	na	92.7	91.4	na
Crude oil runs	14,135	13,841	2.1	13,860	13,596	1.9

	September 1994	August 1994	September 1993	% Change From Month Ago	% Change From Year ago
Stocks (at month-end, in millions of barrels):					
Crude oil (excluding SPR stocks)	331.9	321.8	320.7	3.1	3.5
Unfinished oils	94.4	97.2	102.7	(2.9)	(8.1)
Total motor gasoline	212.0	206.2	208.4	2.8	1.7
Finished oxygenated	18.3	5.9	23.4	210.2	(21.8)
Finished reformulated	0.0	0.0	na	na	na
Finished other	155.4	163.7	147.8	(5.1)	5.1
Blending components	38.3	36.6	37.2	4.6	3.0
Naphtha-jet	1.2	1.2	3.0	0.0	(60.0)
Kerosine-jet	43.3	42.9	38.4	0.9	12.8
Distillate fuel oil	142.3	135.8	131.3	4.8	8.4
≤ 0.05 percent sulfur	67.7	65.9	47.7	2.7	41.9
> 0.05 percent sulfur	74.6	69.9	83.6	6.7	(10.8)
Residual fuel oil	41.0	39.1	43.6	4.9	(6.0)
All other oils	246.9	236.8[R]	231.6	4.3	6.6
Total all oils	1,113.0	1,081.0[R]	1,079.7	3.0	3.1

1—Total supply, i.e., production plus imports adjusted for net stock change is equal to total disposition from primary storage. Total disposition from primary storage less exports equals total domestic products supplied. Information contained in this report is derived from information published in the API *Weekly Statistical Bulletin* and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions. **2**—Based on API estimated data converted to a monthly basis. **3**—Source: U.S. Energy Information Administration (including any adjustments). **4**—Data for most current two months are API estimates. Other data come from U.S. Energy Information Administration (including any adjustments). **5**—An adjustment to avoid double counting resulting from differences in product classifications among different refineries and blenders. **6**—Includes unaccounted-for crude oil, withdrawals from the SPR when they occur, processing gain, field production of other hydrocarbons and alcohol, and downstream blending of ethanol. **7**—Represents "Input to crude oil distillation units" as a percent of "Operable capacity". **R**—Revised. **E**—Estimated. **na**-Not available.

ESTIMATED UNITED STATES PETROLEUM BALANCE[1]
(Daily average in thousands of 42 gallon barrels)

Disposition and Supply	3rd Quarter 1994[3]	3rd Quarter 1993[2]	% Change
Disposition:			
Total motor gasoline	7,746	7,754	(0.1)
Finished oxygenated	813	1,006[E]	(19.2)
Finished reformulated	0	na	na
Finished other	6,933	6,748[E]	2.7
Naphtha-jet	60	123	(51.2)
Kerosine-jet	1,503	1,369	9.8
Distillate fuel oil	2,909	2,821	3.1
≤ 0.05 percent sulfur	1,859	715[E]	160.0
> 0.05 percent sulfur	1,050	2,106[E]	(50.1)
Residual fuel oil	903	1,068	(15.5)
All other oils (including crude losses)	4,473	4,500	(0.6)
Reclassified[4]	-145	-191	na
Total domestic products supplied	17,449	17,444	0.0
Exports	892	911	(2.1)
Total disposition	18,341	18,355	(0.1)
Supply:			
Domestic liquids production:			
Crude oil (including condensate)	6,568	6,719	(2.3)
Natural gas liquids	1,742	1,740	0.1
Other supply[5]	1,293	1,132	14.2
Total domestic supply	9,603	9,591	0.1
Imports:			
Crude oil (excluding SPR imports)	7,691	6,829	12.6
From Canada	962	993	(3.1)
All other	6,729	5,836	15.3
Products	1,993	1,889	5.5
Residual fuel oil	241	384	(37.2)
All other	1,752	1,505	16.4
Total imports	9,684	8,718	11.1
Total supply	19,287	18,309	5.3
Stock change, all oils	946	-46	na
Refinery Operations:			
Input to crude distillation units	14,418	14,182	1.7
Operable capacity	15,173	15,160	0.1
Refinery utilization[6]	95.0	93.5	na
Crude oil runs	14,286	13,941	2.5

	3rd Quarter 1994[3]	3rd Quarter 1993[2]	% Change
Stocks (at quarter-end, in millions of barrels):			
Crude oil (excluding SPR stocks)	331.9	320.7	3.5
Unfinished oils	94.4	102.7	(8.1)
Total motor gasoline	212.0	208.4	1.7
Finished oxygenated	18.3	23.4	(21.8)
Finished reformulated	0.0	na	na
Finished other	155.4	147.8	5.1
Blending components	38.3	37.2	3.0
Naphtha-jet	1.2	3.0	(60.0)
Kerosine-jet	43.3	38.4	12.8
Distillate fuel oil	142.3	131.3	8.4
≤ 0.05 percent sulfur	67.7	47.7	41.9
> 0.05 percent sulfur	74.6	83.6	(10.8)
Residual fuel oil	41.0	43.6	(6.0)
All other oils	246.9	231.6	6.6
Total all oils	1,113.0	1,079.7	3.1

1—Total supply, i.e., production plus imports adjusted for net stock change is equal to total disposition from primary storage. Total disposition from primary storage less exports equals total domestic products supplied. Information contained in this report is derived from information published in the API *Weekly Statistical Bulletin* and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions. **2**—Source: U.S. Energy Information Administration (including any adjustments). **3**—Data for most current two months are API estimates. Other data come from U.S. Energy Information Administration (including any adjustments). **4**—An adjustment to avoid double counting resulting from differences in product classifications among different refineries and blenders. **5**—Includes unaccounted-for crude oil, withdrawals from the SPR when they occur, processing gain, field production of other hydrocarbons and alcohol, and downstream blending of ethanol. **6**—Represents "Input to crude oil distillation units" as a percent of "Operable capacity". **R**—Revised. **E**-Estimate **na**-Not available.